

L Number	Hits	Search Text	DB	Time stamp
1	326	poreus WITH alginate	USPAT; US-PGPHUB; EPO; JPO; DERWENT	2003/01/23 14:13
7	104	poreus WITH alginate) and (DNA or nucleic or RNA or sequence\$1 or nucleic)	USPAT; US-PGPHUB; EPO; JPO; DERWENT	2003/01/23 14:19
13	2	w/ NPAF "4958656"	USPAT; US-PGPHUB; EPO; JPO; DERWENT	2003/01/23 14:21
19	2	w/ NPAF "4716195"	USPAT; US-PGPHUB; EPO; JPO; DERWENT	2003/01/23 14:21
31	23	US-5942446-\$ or US-5783416-\$ or US-581015-\$ or US-581156-\$ or US-581154-\$ or US-581559-\$ or US-583473-\$ or US-589421-\$ or US-443158-\$ or US-4718801-\$ or US-466707-\$ or US-5871490-\$ or US-485250-\$ or US-584238-\$ or US-587817-\$ or US-588551-\$).did. or US-581015-\$).did. or US-5885829-\$ or WO-945336-\$ or US-5718404-\$ or WO-941108-\$ or WO-941404-\$ or WO-941500-\$).did. or WO-941574-\$ or WO-945656-\$).did.	USPAT; US-PGPHUB; EPO; DERWENT	2003/01/23 14:28
36	21	US-5942446-\$ or US-5783416-\$ or US-581015-\$ or US-581156-\$ or US-581154-\$ or US-581559-\$ or US-583473-\$ or US-589421-\$ or US-443158-\$ or US-4718801-\$ or US-466707-\$ or US-5871490-\$ or US-485250-\$ or US-584238-\$ or US-587817-\$ or US-588551-\$).did. or US-581015-\$).did. or US-5885829-\$ or WO-945336-\$ or US-5718404-\$ or WO-941108-\$ or WO-941404-\$ or WO-941500-\$).did. or WO-941574-\$ or WO-945656-\$).did. and pore\$4 pore\$1 alginate nucleic DNA	USPAT; US-PGPHUB; EPO; JPO; DERWENT	2003/01/23 15:07
43	21	US-5942446-\$ or US-5783416-\$ or US-581015-\$ or US-581156-\$ or US-581154-\$ or US-581559-\$ or US-583473-\$ or US-589421-\$ or US-443158-\$ or US-4718801-\$ or US-466707-\$ or US-5871490-\$ or US-485250-\$ or US-584238-\$ or US-587817-\$ or US-588551-\$).did. or US-581015-\$).did. or US-5885829-\$ or WO-945336-\$ or US-5718404-\$ or WO-941108-\$ or WO-941404-\$ or WO-941500-\$).did. or WO-941574-\$ or WO-945656-\$).did. and pore\$4 pore\$1 alginate nucleic DNA)	USPAT; US-PGPHUB; EPO; JPO; DERWENT	2003/01/23 15:22
49	577	(pqla pga pla) SAME (pore\$4 pore\$1 alginate nucleic DNA)	USPAT; US-PGPHUB; EPO; JPO; DERWENT	2003/01/23 15:23
55	214	(pqla pga pla) SAME (pore\$4 pore\$1 alginate nucleic DNA)) and alginate	USPAT; US-PGPHUB; EPO; JPO; DERWENT	2003/01/23 15:27
61	140	(pqla pga pla) SAME (pore\$4 pore\$1 alginate nucleic DNA)) and alginate and gel	USPAT; US-PGPHUB; EPO; JPO; DERWENT	2003/01/23 15:27

-	135	BONADIO	USFAT; US-PGPUB; EPC; JPC; DEFWENT; USOCF	2002/05/01 16:27
-	10	BONADIO and jeffrey.in.	USFAT; US-PGPUB; EPC; JPC; DEFWENT; USOCF	2002/05/01 15:50
-	1	BONADIO and SHEA.in.	USFAT; US-PGPUB; EPC; JPC; DEFWENT; USOCF	2002/05/01 15:50
-	10	BONADIO and goldstein.in.	USFAT; US-PGPUB; EPC; JPC; DEFWENT; USOCF	2002/05/01 16:12
-	2	("6281.55").PH.	USFAT; US-PGPUB; EPC; JPC; DEFWENT; USOCF	2002/05/01 16:15
-	14	mooney-david-.in.	USFAT; US-PGPUB; EPC; JPC; DEFWENT; USOCF	2002/05/01 17:16
-	2	shea-lonnie.in.	USFAT; US-PGPUB; EPC; JPC; DEFWENT; USOCF	2002/05/01 16:26
-	14012	porous NEAR (polymer or microsphere or gel or hydrogel or matrix or alignate)	USFAT; US-PGPUB; EPC; JPC; DEFWENT; USOCF	2002/05/01 17:10
-	1170	(porous NEAR (polymer or microsphere or gel or hydrogel or matrix or alignate)) and (DNA or RNA or nucleic or gene)	USFAT; US-PGPUB; EPC; JPC; DEFWENT; USOCF	2002/05/01 17:21
-	158	(porous NEAR (polymer or microsphere or gel or hydrogel or matrix or alignate)) and (DNA or RNA or nucleic or gene)) and (ELGA or lactic\$15)	USFAT; US-PGPUB; EPC; JPC; DEFWENT; USOCF	2002/05/01 17:42
-	62	(porous NEAR (polymer or microsphere or gel or hydrogel or matrix or alignate)) and (DNA or RNA or nucleic or gene)) and (ELGA or lactic\$15)) and porous.clm.	USFAT; US-PGPUB; EPC; JPC; DEFWENT; USOCF	2002/05/01 17:46
-	16	(porous NEAR (polymer or microsphere or gel or hydrogel or matrix or alignate)) and (DNA or RNA or nucleic or gene)) and (ELGA or lactic\$15)) and (porous and nucleic or DNA).clm.	USFAT; US-PGPUB; EPC; JPC; DEFWENT; USOCF	2002/05/01 17:47
-	14302	porous NEAR (polymer or microsphere or gel or hydrogel or matrix)	USFAT; US-PGPUB; EPC; JPC; DEFWENT; USOCF	2002/09/19 16:04
-	6793	(porous NEAR (polymer or microsphere or gel or hydrogel or matrix)) and gas\$5	USFAT; US-PGPUB; EPC; JPC; DEFWENT; USOCF	2002/09/19 15:18

-	6521	porous NEAR (polymer or microsphere or gel or hydrogel or matrix)) and gas	USPAT; US-PGPUB; EPO; JPO; DEFWENT; USOCE	2002/09/19 15:18
-	1424	(porous NEAR (polymer or microsphere or gel or hydrogel or matrix)) and gas) and gas.clm.	USPAT; US-PGPUB; EPO; JPO; DEFWENT	2002/09/19 15:25
-	45	porous NEAR (polymer or microsphere or gel or hydrogel or matrix) NEAR gas	USPAT; US-PGPUB; EPO; JPO; DEFWENT; USOCE	2002/09/19 15:30
-	1198	porous NEAR (polymer or microsphere or gel or hydrogel or matrix) AND gas AND (DNA or nucleic or sequence)	USPAT; US-PGPUB; EPO; JPO; DEFWENT; USOCE	2002/09/19 16:42
-	12	porous NEAR (polymer or microsphere or gel or hydrogel or matrix) AND gas AND (DNA or nucleic or sequence)) and 435-625.clm.	USPAT; US-PGPUB; EPO; JPO; DEFWENT; USOCE	2002/09/19 15:37
-		alginate SAME (nucleic or DNA)	USPAT; US-PGPUB; EPO; JPO; DEFWENT; USOCE	2002/09/19 15:39
-	4498	alginate AND (nucleic or DNA)	USPAT; US-PGPUB; EPO; JPO; DEFWENT; USOCE	2002/09/19 15:53
-	251	(alginate AND (nucleic or DNA)) and alginate.clm.	USPAT; US-PGPUB; EPO; JPO; DEFWENT; USOCE	2002/09/19 15:45
-	60	((alginate AND (nucleic or DNA)) and alginate.clm.) and (nucleic or DNA).clm.	USPAT; US-PGPUB; EPO; JPO; DEFWENT; USOCE	2002/09/19 15:53
-	31	((alginate AND (nucleic or DNA)) and alginate.clm.) and (nucleic or DNA).clm.) and gas	USPAT; US-PGPUB; EPO; JPO; DEFWENT; USOCE	2002/09/19 15:54
-	6	((alginate AND (nucleic or DNA)) and alginate.clm.) and (nucleic or DNA).clm.) and gas.clm.	USPAT; US-PGPUB; EPO; JPO; DEFWENT; USOCE	2002/09/19 15:54
-	693	(alginate AND (nucleic or DNA)) and porous	USPAT; US-PGPUB; EPO; JPO; DEFWENT; USOCE	2002/09/19 15:59
-	355	((alginate AND (nucleic or DNA)) and porous) and gas	USPAT; US-PGPUB; EPO; JPO; DEFWENT; USOCE	2002/09/19 15:59
-	96	((porous NEAR (polymer or microsphere or gel or hydrogel or matrix) and gas) and gas.clm.) and leach\$5	USPAT; US-PGPUB; EPO; JPO; DEFWENT; USOCE	2002/09/19 16:05

-	171	(porous NEAF (polymer or microsphere or gel or hydrogel or matrix) AND gas AND (DNA or nucleic or sequence)) and leach\$5	USPAT; US-PGFUE; EPC; CPC; DEFWENT; USOCP	2002/09/19 16:07
-	13	(porous NEAF (polymer or microsphere or gel or hydrogel or matrix) AND gas AND (DNA or nucleic or sequence)) and 435/325	USPAT; US-PGFUE; EPC; CPC; DEFWENT; USOCP	2002/09/19 16:07
-	12	(porous NEAF (polymer or microsphere or gel or hydrogel or matrix) AND gas AND (DNA or nucleic or sequence)) and 435/325.ccls.	USPAT; US-PGFUE; EPC; CPC; DEFWENT; USOCP	2002/09/19 16:08
-	21	microsphere\$5 SAME gas SAME (DNA or nucleic)	USPAT; US-PGFUE; EPC; CPC; DEFWENT; USOCP	2002/09/19 16:39
-	4	"1-1" and leach\$5	USPAT; US-PGFUE; EPC; CPC; DEFWENT; USOCP	2002/09/19 16:40
-	46	435/325.ccls. and leach\$5	USPAT; US-PGFUE; EPC; CPC; DEFWENT; USOCP	2002/09/19 16:41
-	1418	435/325.ccls. and leach\$5	USPAT; US-PGFUE; EPC; CPC; DEFWENT; USOCP	2002/09/19 16:42
-	32	(porous NEAF (polymer or microsphere or gel or hydrogel or matrix) AND gas AND (DNA or nucleic or sequence)) and (435/325.ccls. and leach\$5)	USPAT; US-PGFUE; EPC; CPC; DEFWENT; USOCP	2002/09/19 16:42

(FILE 'HOME' ENTERED AT 15:31:00 ON 23 JAN 2003)

FILE 'MEDLINE, AGRICOLA, CANCERLIT, SCISEARCH, CAPLUS, MEDICONF' ENTERED
AT 15:31:08 ON 23 JAN 2003

L1 1419 S ALGINATE (L) POR?
L2 435 S L1 AND GEL
L3 76 S L1 AND (DNA OR RNA OR NUCLEIC OR PLASMID OR VECTOR OR SEQUENC
L4 40 DUP REM L3 (36 DUPLICATES REMOVED)
L5 40 FOCUS L4 1-

=> d an ti so au ab pi 15 1-9

L5 ANSWER 1 OF 40 CAPLUS COPYRIGHT 2003 ACS

AN 1999:736893 CAPLUS

DN 131:332976

TI Sustained **dna** delivery from structural porous matrices for gene
therapy applications with special emphasis is on bone formation and
regeneration

SO PCT Int. Appl., 144 pp.

CODEN: PIXXD2

IN Shea, Lonnie D.; Bonadido, Jeffrey; Mooney, David J.

AB Disclosed are particular 3-dimensional structural matrixes contg.

DNA and their use in the prolonged release of **DNA** in
various biol. environments. The structural matrix is a **porous**
polymer [PLGA]-based contg. **pores** formed by gas foaming
involving inert gases (CO₂) and leaching out of a water-sol. particulate
(salt, NaCl, sugar, glucose, sucrose, mannitol) when exposed to body
fluids. The admixt. is compression molded into a selected size and shape
prior to executing the gas foaming process. The structural matrix may
also be an **alginate** or modified **alginate** matrix. This
structural matrix is a biocompatible or biodegradable matrix. It may also
be a lactic acid polymer, glycolic acid polymer or lactic acid/glycolic
acid copolymer matrix. At least part of this matrix may be comprised of
lactic acid/glycolic acid (PLGA) copolymer matrix. The structural matrix
may be modified where one side section is bonded to one cell interaction
mol. such as cell adhesion mols., cell attachment peptides, proteoglycan
attachment peptide **sequences**, proteoglycans, cell adhesion
polysaccharides, growth factors, cell adhesion enzymes, RGD peptide,
fibronectin, vitronectin, Laminin A, Laminin B1, Laminin B2, collagen 1
and thrombospondin. The **DNA**-matrix materials are created such
that they maintain a defined space, allowing cellular migration,
transfection and proliferation to occur in a controlled manner. Such
DNA-contg. structural matrixes are thus particularly useful in in
vivo cell transfection and gene expression in the context of gene therapy.
This may encode a protein for stimulating bone progenitors or wound
healing in fibroblast or in tissue or organ regeneration or
transplantation or an antigen for immunity or cytotoxic or
apoptosis-inducing protein or a transcription factor or elongation factor
or cell cycle control protein or kinase or phosphatase or **DNA**
repair protein or oncogene or tumor suppressor or angiogenic protein or
anti-angiogenic protein or immune response stimulating protein or cell
surface receptor or accessory signaling mol. or transport protein or
anti-bacterial or anti-viral protein or hormone or neurotransmitter or
growth factor or growth factor receptor or interferon or interleukin or
chemokine or cytokine or colony stimulating factor or chemotactic factor
protein of growth hormone or parathyroid hormone or PTH1-34 polypeptide or
bone morphogenic protein or BMP-2A or BMP-2B or BMP-3 or BMP-4 or BMP-5 or
BMP-6 or BMP-7 or BMP-8 or TGF-.alpha. or TGF-.beta.1 or TGF-.beta.2 or
latent TGF-.beta. binding protein or activin/inhibin protein or FGF or
GM-CSF or EGF or PDGF or insulin-like growth factor or leukemia inhibitory
factor. This method allows for the use in gene transfer to cells within a
tissue site and in manuf. of a medicament for gene therapy. Implantable
medical devices comprising this gene-matrix are described. The release of
nucleic acids from the matrix is controlled by diffusion. This
method also applies to cancer therapy or treating viral infection.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9958656	A2	19991118	WO 1999-US10330	19990512
WO 9958656	A3	20000106		

Elastins
 Enzymes, biological studies
 Fibrins
 Fibroblast
 Fibronectins
 Glass, biological studies
 Globins
 Hematopoietic precursor cell
 Hormones, animal, biological studies
 Immunoglobulins
 Interferons
 Interleukin 2 receptors
 Interleukins
 Laminins
 Myoblast
 Neuroglia
 Osteoblast
 Peptides, biological studies
 Platelet-derived growth factors
 Polyamide fibers, biological studies
 Polyester fibers, biological studies
 Polyesters, biological studies
 Polysulfones, biological studies
 Proteoglycans, biological studies
 Receptors
 Silk
 Tenascins
 Transforming growth factors
 Vaccines
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (hybrid matrix implants and explants)
 IT Drug delivery systems
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (implants; hybrid matrix implants and explants)
 IT Skin
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (keratinocyte; hybrid matrix implants and explants)
 IT Drug delivery systems
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (microspheres; hybrid matrix implants and explants)
 IT Nerve
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (neuron, cells; hybrid matrix implants and explants)
 IT Muscle
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (smooth, cells; hybrid matrix implants and explants)
 IT Pancreatic islet of Langerhans
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (.beta.-cell; hybrid matrix implants and explants)
 IT 9001-27-8, Factor VIII 9001-28-9, Factor IX 9002-64-6, Parathyroid
 hormone 9003-05-8, Polyacrylamide 9003-53-6, Polystyrene 9004-10-8,
 Insulin, biological studies 9004-34-6, Cellulose, biological studies
 9004-54-0, Dextran, biological studies 9004-61-9, Hyaluronic acid
 9005-32-7, Alginic acid 9005-35-0, Calcium alginate 9007-12-9,
 Calcitonin 9012-36-6, Agarose 9041-92-3 9050-30-0, Heparan sulfate
 11096-26-7, Erythropoietin 12629-01-5, Human growth hormone
 24967-94-0, Dermatan sulfate 37228-64-1, Glucocerebrosidase
 62229-50-9, Epidermal growth factor 62683-29-8, Colony stimulating
 factor 67763-96-6, Insulin-like growth factor 1 83869-56-1,
 Granulocyte-macrophage colony stimulating factor 106096-92-8, Acidic
 fibroblast growth factor 106096-93-9, Basic fibroblast growth factor
 139639-23-9, Tissue plasminogen activator 143011-72-7, Granulocyte
 colony stimulating factor 159494-85-3, Leptin
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (hybrid matrix implants and explants)

=>

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
 DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,
 KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN,
 MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
 TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
 ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BJ, BJ, CF, CG,
 CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9938986 A1 19991129 AU 1999-38986 19990512

L9 ANSWER 21 OF 24 CAPLUS COPYRIGHT 2003 ACS

AN 1997:377878 CAPLUS

DN 126:347315

TI Hybrid matrix implants and explants

SO PCT Int. Appl., 50 pp.

CODEN: PIXXD2

IN Mineau-Hanschke, Rochelle

AB An implantable device having a body of matrix material made up of insol. collagen fibrils, and disposed therewithin: (a) a plurality of vertebrate cells; and (b) a plurality of microspheres each of which consists primarily of one or more of the following materials: collagen, polystyrene, dextran, polyacrylamide, cellulose, calcium **alginate**, latex, polysulfone, or glass. A clonal cell strain of human fibroblasts stable transfected with the **plasmid** pXGH302 secreting recombinant human growth hormone was prepd. and combined with **porous** collagen microspheres in a hybrid matrix.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9715195	A1	19970501	WO 1996-US17114	19961025 <--
W:	AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA			
US 5965125	A	19991012	US 1995-548002	19951025
AU 9674744	A1	19970515	AU 1996-74744	19961025 <--
AU 706563	B2	19990617		
CN 1205613	A	19990120	CN 1996-199324	19961025
EP 917428	A1	19990526	EP 1996-936960	19961025
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
BR 9611248	A	19991228	BR 1996-11248	19961025
JP 2000501294	T2	20000208	JP 1997-516903	19961025
NO 9801859	A	19980624	NO 1998-1859	19980424 <--
AU 736255	B2	20010726	AU 1999-48841	19990921

TI Hybrid matrix implants and explants
 IN Mineau-Hanschke, Rochelle
 PA Transkaryotic Therapies, Inc., USA
 SO PCT Int. Appl., 50 pp.
 CODEN: PIXXD2

DT Patent

LA English

IC ICM A01N063-00

ICS A01N065-00; A61K048-00; A61F013-00; C12N005-16; C12N015-16;
 C12N015-85; B01D063-00

CC 63-6 (Pharmaceuticals)

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 9715195	A1	19970501	WO 1996-US17114	19961025 <--	
	W:			AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM		
	RW:			KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA		
	US 5965125	A	19991012	US 1995-548002	19951025	
	AU 9674744	A1	19970515	AU 1996-74744	19961025 <--	
	AU 706563	B2	19990617			
	CN 1205613	A	19990120	CN 1996-199324	19961025	
	EP 917428	A1	19990526	EP 1996-936960	19961025	
	R:			AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO		
	BR 9611248	A	19991228	BR 1996-11248	19961025	
	JP 2000501299	T2	20000208	JP 1997-516803	19961025	
	NO 9801859	A	19980624	NO 1998-1859	19980424 <--	
	AU 736255	B2	20010726	AU 1999-48841	19990921	
PRAI	US 1995-548002	A	19951025			
	WO 1996-US17114	W	19961025			
AB	An implantable device having a body of matrix material made up of insol. collagen fibrils, and disposed therewithin: (a) a plurality of vertebrate cells; and (b) a plurality of microspheres each of which consists primarily of one or more of the following materials: collagen, polystyrene, dextran, polyacrylamide, cellulose, calcium alginate , latex, polysulfone, or glass. A clonal cell strain of human fibroblasts stable transfected with the plasmid pXGH302 secreting recombinant human growth hormone was prep'd. and combined with porous collagen microspheres in a hybrid matrix.					
ST	hybrid matrix implant explant					
IT	Lipoprotein receptors					
	RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (LDL; hybrid matrix implants and explants)					
IT	Adipose tissue					
	RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (adipocyte; hybrid matrix implants and explants)					
IT	Kidney					
	Muscle					
	RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (cells; hybrid matrix implants and explants)					
IT	Liver					
	RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (hepatocyte; hybrid matrix implants and explants)					
IT	Collagens, biological studies					
	RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (hybrid matrix implants and explants)					
IT	Angiogenic factors					
	Antibodies					
	Antigens					
	Blood-coagulation factors					
	Chondrocyte					
	Cotton					
	Cytokines					
	DNA					

(FILE 'HOME' ENTERED AT 15:31:00 ON 23 JAN 2003)

FILE 'MEDLINE, AGRICOLA, CANCERLIT, SCISEARCH, CAPLUS, MEDICNF' ENTERED
AT 15:31:08 ON 23 JAN 2003

L1 1419 S ALGINATE (L) POR?
L2 435 S L1 AND GEL
L3 76 S L1 AND (DNA OR RNA OR NUCLEIC OR PLASMID OR VECTOR OR SEQUENC
L4 40 DUP REM L3 (36 DUPLICATES REMOVED)
L5 40 FOCUS L4 1-
L6 87 S L1 AND (DNA OR RNA OR NUCLEIC OR PLASMID OR VECTOR OR SEQUENC
L7 45 DUP REM L6 (42 DUPLICATES REMOVED)
L8 24 S L7 AND PY<=1998
L9 24 SORT L8 PY
L10 207376 S HIS

=> d 19 24 all

L9 ANSWER 24 OF 24 CAPLUS COPYRIGHT 2003 ACS
AN 1999:159891 CAPLUS
DN 130:342815
TI Synthetic extracellular matrixes to guide tissue formation
AU Peters, Martin C.; Mooney, David J.
CS Department of Biomedical Engineering, University of Michigan, Ann Arbor,
MI, 48109-1078, USA
SO International Congress Series (1998), 1170(Tissue Engineering
for Therapeutic Use 2), 55-65
CODEN: EXMDA4; ISSN: 0531-5131
PB Elsevier Science B.V.
DT Journal; General Review
LA English
CC 63-0 (Pharmaceuticals)
Section cross-reference(s): 16
AB A review with 44 refs. Tissues engineered from cultured cells may
potentially be utilized to treat a variety of diseases, but techniques to
promote the development of proper tissue structure and function must first
be developed. The native extracellular matrix (ECM) of tissues aids this
process during development by providing mech. support to the forming
tissue, localizing cells to specific locations, and regulating
gene expression. Many investigators are attempting to create
synthetic analogs to the ECM that will serve these functions, and promote
new tissue formation from cultured cells. We propose to utilize
combinations of macrostructures to provide tissue-level control of
structure with hydrogels to provide cell-level guidance over cell
function. Highly **porous** fiber-based and sponge-based
macrostructures have been formed from biodegradable synthetic polymers,
e.g., polyglycolic acid, using a variety of polymer processing methods.
Proper design leads to synthetic ECM which provide mech. support for the
developing tissue, and guidance for the development of gross tissue
structure. In addn., sol. chem. signals, e.g., protein growth factors,
can be delivered to cells utilizing these matrixes. We are also currently
developing hydrogels in which cells within the macrostructures can be
immobilized. These matrixes are in intimate contact with the cells and
provide guidance, at the cell level, over tissue structure and function.
Alginates (polysaccharides derived from seaweed) have been
covalently modified to allow specific cellular recognition and adhesion.
These synthetic ECM have shown promise to engineer a variety of tissues,
including smooth muscle and dental pulp.
ST review tissue formation extracellular matrix
IT Animal tissue
Animal tissue culture
(synthetic extracellular matrixes to guide tissue formation)
IT Engineering
(tissue; synthetic extracellular matrixes to guide tissue formation)
IT 9005-32-7, Alginic acid 26009-03-0, Polyglycolic acid 26124-68-5,
Polyglycolic acid
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic
use); BIOL (Biological study); PROC (Process); USES (Uses)
(synthetic extracellular matrixes to guide tissue formation)
RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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(FILE 'HOME' ENTERED AT 15:31:00 ON 23 JAN 2003)

FILE 'MEDLINE, AGRICOLA, CANCERLIT, SCISEARCH, CAPLUS, MEDICONF' ENTERED
AT 15:31:08 ON 23 JAN 2003

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L1      1419 S ALGINATE (L) POR?
L2      435 S L1 AND GEL
L3      76 S L1 AND (DNA OR RNA OR NUCLEIC OR PLASMID OR VECTOR OR SEQUENC
L4      40 DUP REM L3 (36 DUPLICATES REMOVED)
L5      40 FOCUS L4 1-
L6      87 S L1 AND (DNA OR RNA OR NUCLEIC OR PLASMID OR VECTOR OR SEQUENC
L7      45 DUP REM L6 (42 DUPLICATES REMOVED)
L8      24 S L7 AND PY<=1998
L9      24 SORT L8 PY
L10     207376 S HIS
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=> d 19 21 all

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L9      ANSWER 21 OF 24 CAPLUS COPYRIGHT 2003 ACS
AN      1997:377878 CAPLUS
DN      126:347315
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(FILE 'HOME' ENTERED AT 13:39:01 ON 23 JAN 2003)

FILE 'MEDLINE, AGRICOLA, CANCERLIT, SCISEARCH, CAPLUS, MEDICONF' ENTERED
AT 13:39:09 ON 23 JAN 2003

L1 26 S POROUS ALGINATE
L2 15 DUP REM L1 (11 DUPLICATES REMOVED)
L3 15 SORT L2 PY
L4 449 S POROUS (L) ALGINATE
L5 15 S L4 AND (DNA OR NUCLEIC OR GENE)
L6 10 DUP REM L5 (5 DUPLICATES REMOVED)
L7 10 SORT L6 PY
L8 319 S L4 AND PY<=1998
L9 252 DUP REM L8 (57 DUPLICATES REMOVED)
L10 50 S L9 AND PORE?
L11 65 S L9 AND (PORE? OR GAS)
L12 65 FOCUS L11 1-
L13 4 S L9 AND (DNA OR NUCLEIC OR GENE OR DEOXY? OR RNA OR RIBO? OR

=> d l13 2 all

L13 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 1997:377878 CAPLUS

DN 126:347315

TI Hybrid matrix implants and explants

IN Mineau-Hanschke, Rochelle

PA Transkaryotic Therapies, Inc., USA

SO PCT Int. Appl., 50 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A01N063-00

ICS A01N065-00; A61K048-00; A61F013-00; C12N005-16; C12N015-16;

C12N015-85; B01D063-00

CC 63-6 (Pharmaceuticals)

FAN.CNT 4

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9715195	A1	19970501	WO 1996-US17114	19961025 <--
W: AL, AM, AT, AU, A7, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SE, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA				
US 5965125	A	19991012	US 1995-548002	19951025
AU 9674744	A1	19970515	AU 1996-74744	19961025 <--
AU 706563	B2	19990617		
CN 1205613	A	19990120	CN 1996-199324	19961025
EP 917428	A1	19990526	EP 1996-936960	19961025
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 9611248	A	19991228	BR 1996-11248	19961025
JP 2000501299	T2	20000208	JP 1997-516803	19961025
NO 9801859	A	19980624	NO 1998-1859	19980424 <--
AU 736255	B2	20010726	AU 1999-48841	19990921
PRAI US 1995-548002	A	19951025		
WO 1996-US17114	W	19961025		
AB	An implantable device having a body of matrix material made up of insol. collagen fibrils, and disposed therewithin: (a) a plurality of vertebrate cells; and (b) a plurality of microspheres each of which consists primarily of one or more of the following materials: collagen, polystyrene, dextran, polyacrylamide, cellulose, calcium alginate , latex, polysulfone, or glass. A clonal cell strain of human fibroblasts stable transfected with the plasmid pXGH302 secreting recombinant human growth hormone was prep'd. and combined with porous collagen microspheres in a hybrid matrix.			
ST	hybrid matrix implant explant			
IT	Lipoprotein receptors			
RL:	THU (Therapeutic use); BICL (Biological study); USES (Uses)			

(LDL; hybrid matrix implants and explants)

IT Adipose tissue
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (adipocyte; hybrid matrix implants and explants)

IT Kidney
 Muscle
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (cells; hybrid matrix implants and explants)

IT Liver
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (hepatocyte; hybrid matrix implants and explants)

IT Collagens, biological studies
 RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (hybrid matrix implants and explants)

IT Angiogenic factors
 Antibodies
 Antigens
 Blood-coagulation factors
 Chondrocyte
 Cotton
 Cytokines
DNA
 Elastins
 Enzymes, biological studies
 Fibrins
 Fibroblast
 Fibronectins
 Glass, biological studies
 Globins
 Hematopoietic precursor cell
 Hormones, animal, biological studies
 Immunoglobulins
 Interferons
 Interleukin 2 receptors
 Interleukins
 Laminins
 Myoblast
 Neuroglia
 Osteoblast
 Peptides, biological studies
 Platelet-derived growth factors
 Polyamide fibers, biological studies
 Polyester fibers, biological studies
 Polyesters, biological studies
 Polysulfones, biological studies
 Proteoglycans, biological studies
 Receptors
 Silk
 Tenascins
 Transforming growth factors
 Vaccines
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (hybrid matrix implants and explants)

IT Drug delivery systems
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (implants; hybrid matrix implants and explants)

IT Skin
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (keratinocyte; hybrid matrix implants and explants)

IT Drug delivery systems
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (microspheres; hybrid matrix implants and explants)

IT Nerve
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (neuron, cells; hybrid matrix implants and explants)

IT Muscle
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (smooth, cells; hybrid matrix implants and explants)

IT Pancreatic islet of Langerhans

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (.beta.-cell; hybrid matrix implants and explants)
 IT 9001-27-8, Factor VIII 9001-28-9, Factor IX 9002-64-6, Parathyroid
 hormone 9003-05-8, Polyacrylamide 9003-53-6, Polystyrene 9004-10-8,
 Insulin, biological studies 9004-34-6, Cellulose, biological studies
 9004-54-0, Dextran, biological studies 9004-61-9, Hyaluronic acid
 9005-32-7, Alginic acid 9005-35-0, Calcium alginate 9007-12-9,
 Calcitonin 9012-36-6, Agarose 9041-92-3 9050-30-0, Heparan sulfate
 11096-26-7, Erythropoietin 12629-01-5, Human growth hormone
 24967-94-0, Dermatan sulfate 37228-64-1, Glucocerebrosidase
 62229-50-9, Epidermal growth factor 62683-29-8, Colony stimulating
 factor 67763-96-6, Insulin-like growth factor 1 83869-56-1,
 Granulocyte-macrophage colony stimulating factor 106096-92-8, Acidic
 fibroblast growth factor 106096-93-9, Basic fibroblast growth factor
 139639-23-9, Tissue plasminogen activator 143011-72-7, Granulocyte
 colony stimulating factor 169494-85-3, Leptin
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (hybrid matrix implants and explants)

=>

L12 ANSWER 1 OF 65 CAPLUS COPYRIGHT 2003 ACS

AN 1988:57576 CAPLUS

DN 108:57576

TI **Porous alginate** moldings

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

IN Hirasa, Okihiko

AB **Porous** moldings useful in culturing of enzymes, microbes, etc. are prepd. by heating aq. **alginates** with aq. poly(vinyl Me ether) (I) to the phase transition temp. (T) of I adding aq. metal salts forming insol. **alginates**, and extg. I with water at temps. below T. A mixt. of 1 part 5% Na **alginate** and 1 part 30% I was coated (0.5 mm) on glass, dipped for 10 min in 2% CuSO₄ at 40.degree., removed from the glass, and extd. with water to give a Cu **alginate** film with **pore** diam. 10-50 .mu. and water permeability 70 times that of a film prepd. without I.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62250040	A2	19871030	JP 1986-93833	19860423 <--
	JP 05053926	B4	19930811		

L12 ANSWER 2 OF 65 CAPLUS COPYRIGHT 2003 ACS

AN 1995:869435 CAPLUS

DN 123:260244

TI Low-density crosslinked porous hydrogel polymer materials having good compression strength and articles formed therefrom

SO PCT Int. Appl., 39 pp.

CODEN: PIXXD2

IN Unger, Peter D.; Fohrbach, Ronald P.

AB The title materials are prepd. by dissolving a hydrogel polymer selected from **alginates**, gums, starch, dextrans, agar, gelatins, casein, collagen, poly(vinyl alc.), polyethylenimine, acrylate polymers, starch-acrylate polymers, or mixts. or copolymers thereof in a gelling solvent, forming a gel from the soln. into a form, replacing the gelling solvent with a crosslinking solvent using a conc. gradient solvent-exchange process, and treating the gel with a crosslinking agent to form **porous** bodies with a open-celled three-dimensional lattice structure, d. <1.0, surface area .gtoreq.30 m²/g, compressibility .ltoreq.10% yield at 10 psi, and av. **pore** diam. <100 .ANG.. Thus, 5% aq. Na **alginate** soln. was gelled in 0.2 M CaCl₂ soln., formed into cubes, treated with aq. 25% acetone, subsequently treated with aq. 50% acetone, then treated with aq. 50% acetone, finally treated with acetone, treated with a mixt. of 2,4-tolylene diisocyanate and triethylamine, heated 16 h at 100-110.degree. to give a crosslinked hydrogel material with apparent bulk d. 0.164, surface area 380 m²/g, **pore** vol. 2.97 cm³/g, and av. **pore** diam. 365 .ANG..

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9512632	A2	19950511	WO 1994-US12645	19941102 <--
	WO 9512632	A3	19950526		
	W: JP				
	US 5502082	A	19960326	US 1993-148110	19931104 <--
	JP 08505431	T2	19960611	JP 1994-513411	19941102 <--

L12 ANSWER 4 OF 65 CAPLUS COPYRIGHT 2003 ACS

AN 1978:173017 CAPLUS

DN 88:173017

TI Porous material

SO Ger. Offen., 26 pp.

CODEN: GWXXBX

IN Miles, Brynley John

AB Discrete **porous** particles for mol. sieve applications are made by mixing a finely distributed, practically insol., absorbent inorg. material in an aq. soln. of a sol. **alginate** (e.g., Na **alginate**) to form the slurry into droplets, contacting the droplets with a reagent (e.g., aq. NaCl soln.) to ppt. the sol. **alginate** as insol. **alginate** thus producing intermediate particles contg. the inorg. material combined with the pptd. **alginate**. The **alginate** is at least partially removed by heating to yield discrete **porous** particles. The **alginate** may be pptd. with an acid. A 2nd **pore**-forming substance may be added to increase or modify the porosity. Thus, TiO₂ is slurried in a 1% aq. Na **alginate** soln. in a ball mill for 5 h, the slurry added in droplets to a 0.1 M NaCl soln. to form discrete particles contg. TiO₂ particles bonded by the Ca **alginate** pptd. The particles are transferred to MeOH, dehydrated, heated to 100.degree. for 1-2 h, and sintered at 900.degree.. Discrete **porous** TiO₂ particles with a diam. of 500.mu. are obtained.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2727143	A1	19771229	DE 1977-2727143	19770616 <--
	DE 2727143	C2	19890323		
	GB 1586364	A	19810318	GB 1976-25209	19760617 <--
	SE 7706990	A	19771218	SE 1977-6990	19770616 <--
	SE 435717	B	19841015		
	SE 435717	C	19850124		
	NL 7706730	A	19771220	NL 1977-6730	19770617 <--
	JP 52154814	A2	19771222	JP 1977-71947	19770617 <--
	JP 63023158	B4	19880514		
	SE 9207520	A	19821230	SE 1982-7520	19821230 <--
	SE 451715	B	19871026		
	SE 451715	C	19880204		

(FILE 'HOME' ENTERED AT 13:39:01 ON 23 JAN 2003)

FILE 'MEDLINE, AGRICOLA, CANCERLIT, SCISEARCH, CAPLUS, MEDICONF' ENTERED
AT 13:39:09 ON 23 JAN 2003

L1 26 S POROUS ALGINATE
L2 15 DUP REM L1 (11 DUPLICATES REMOVED)
L3 15 SORT L2 PY
L4 449 S POROUS (L) ALGINATE
L5 15 S L4 AND (DNA OR NUCLEIC OR GENE)
L6 10 DUP REM L5 (5 DUPLICATES REMOVED)
L7 10 SORT L6 PY

=> d an ti so au ab pi l7 4 2 3 6 8

L7 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2003 ACS
AN 1999:736893 CAPLUS
DN 111:332976

TI Sustained **dna** delivery from structural porous matrices for
gene therapy applications with special emphasis is on bone
formation and regeneration

SO PCT Int. Appl., 144 pp.
CODEN: PIXXD2

IN Shea, Lonnie D.; Bonadido, Jeffrey; Mooney, David J.

AB Disclosed are particular 3-dimensional structural matrixes contg.

DNA and their use in the prolonged release of **DNA** in various biol. environments. The structural matrix is a **porous** polymer [PLGA]-based contg. pores formed by gas foaming involving inert gases (CO2) and leaching out of a water-sol. particulate (salt, NaCl, sugar, glucose, sucrose, mannitol) when exposed to body fluids. The admxt. is compression molded into a selected size and shape prior to executing the gas foaming process. The structural matrix may also be an **alginate** or modified **alginate** matrix. This structural matrix is a biocompatible or biodegradable matrix. It may also be a lactic acid polymer, glycolic acid polymer or lactic acid/glycolic acid copolymer matrix. At least part of this matrix may be comprised of lactic acid/glycolic acid (PLGA) copolymer matrix. The structural matrix may be modified where one side section is bonded to one cell interaction mol. such as cell adhesion mols., cell attachment peptides, proteoglycan attachment peptide sequences, proteoglycans, cell adhesion polysaccharides, growth factors, cell adhesion enzymes, RGD peptide, fibronectin, vitronectin, Laminin A, Laminin B1, Laminin B2, collagen 1 and thrombospondin. The **DNA**-matrix materials are created such that they maintain a defined space, allowing cellular migration, transfection and proliferation to occur in a controlled manner. Such **DNA**-contg. structural matrixes are thus particularly useful in in vivo cell transfection and **gene** expression in the context of **gene** therapy. This may encode a protein for stimulating bone progenitors or wound healing in fibroblast or in tissue or organ regeneration or transplantation or an antigen for immunity or cytotoxic or apoptosis-inducing protein or a transcription factor or elongation factor or cell cycle control protein or kinase or phosphatase or **DNA** repair protein or oncogene or tumor suppressor or angiogenic protein or anti-angiogenic protein or immune response stimulating protein or cell surface receptor or accessory signaling mol. or transport protein or anti-bacterial or anti-viral protein or hormone or neurotransmitter or growth factor or growth factor receptor or interferon or interleukin or chemokine or cytokine or colony stimulating factor or chemotactic factor protein of growth hormone or parathyroid hormone or PTH-34 polypeptide or bone morphogenic protein or BMP-2A or BMP-2B or BMP-3 or BMP-4 or BMP-5 or BMP-6 or BMP-7 or BMP-8 or TGF-.alpha. or TGF-.beta.1 or TGF-.beta.2 or latent TGF.beta. binding protein or activin/inhibin protein or FGF or GM-CSF or EGF or PDGF or insulin-like growth factor or leukemia inhibitory factor. This method allows for the use in **gene** transfer to cells within a tissue site and in manuf. of a medicament for **gene** therapy. Implantable medical devices comprising this **gene**-matrix are described. The release of **nucleic** acids from the matrix is controlled by diffusion. This method also applies to cancer therapy or treating viral infection.

PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 9958656 A2 19991118 WO 1999-US10330 19990512
 WO 9958656 A3 20000106
 W: AL, AM, AT, AU, A7, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BJ, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
 AU 9938986 A1 19991129 AU 1999-38986 19990512

L7 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2003 ACS

AN 1997:377878 CAPLUS

DN 126:347315

TI Hybrid matrix implants and explants

SO PCT Int. Appl., 50 pp.

CODEN: PIXXD2

IN Mineau-Hanschke, Rochelle

AB An implantable device having a body of matrix material made up of insol. collagen fibrils, and disposed therewithin: (a) a plurality of vertebrate cells; and (b) a plurality of microspheres each of which consists primarily of one or more of the following materials: collagen, polystyrene, dextran, polyacrylamide, cellulose, calcium **alginate**, latex, polysulfone, or glass. A clonal cell strain of human fibroblasts stable transfected with the plasmid pXGH302 secreting recombinant human growth hormone was prepd. and combined with **porous** collagen microspheres in a hybrid matrix.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9715195	A1	19970501	WO 1996-US17114	19961025
W:			AL, AM, AT, AU, A2, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM	
RW:			KE, LS, MW, SD, SE, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA	
US 5965125	A	19991012	US 1995-548002	19951025
AU 9674744	A1	19970515	AU 1996-74744	19961025
AU 706563	B2	19990617		
CN 1205613	A	19990120	CN 1996-199324	19961025
EP 917428	A1	19990526	EP 1996-936960	19961025
R:			AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO	
BR 9611248	A	19991228	BR 1996-11248	19961025
JP 2000501299	T2	20000208	JP 1997-516803	19961025
NO 9801859	A	19980624	NO 1998-1859	19980424
AU 736255	B2	20010726	AU 1999-48841	19990921

L7 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2003 ACS

AN 1999:159891 CAPLUS

DN 130:342815

TI Synthetic extracellular matrixes to guide tissue formation

SO International Congress Series (1998), 1170(Tissue Engineering for Therapeutic Use 2), 55-65

CODEN: EXMDA4; ISSN: 0531-5131

AU Peters, Martin C.; Mooney, David J.

AB A review with 44 refs. Tissues engineered from cultured cells may potentially be utilized to treat a variety of diseases, but techniques to promote the development of proper tissue structure and function must first be developed. The native extracellular matrix (ECM) of tissues aids this process during development by providing mech. support to the forming tissue, localizing cells to specific locations, and regulating **gene** expression. Many investigators are attempting to create synthetic analogs to the ECM that will serve these functions, and promote new tissue formation from cultured cells. We propose to utilize combinations of macrostructures to provide tissue-level control of structure with hydrogels to provide cell-level guidance over cell

function. Highly **porous** fiber-based and sponge-based macrostructures have been formed from biodegradable synthetic polymers, e.g., polyglycolic acid, using a variety of polymer processing methods. Proper design leads to synthetic ECM which provide mech. support for the developing tissue, and guidance for the development of gross tissue structure. In addn., sol. chem. signals, e.g., protein growth factors, can be delivered to cells utilizing these matrixes. We are also currently developing hydrogels in which cells within the macrostructures can be immobilized. These matrixes are in intimate contact with the cells and provide guidance, at the cell level, over tissue structure and function. **Alginates** (polysaccharides derived from seaweed) have been covalently modified to allow specific cellular recognition and adhesion. These synthetic ECM have shown promise to engineer a variety of tissues, including smooth muscle and dental pulp.

L7 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2003 ACS
 AN 2002:118123 CAPLUS
 DN 136:139515
 TI Automatic water toxicant measuring instrument using immobilized photogenic microorganism
 SO Repub. Korean Kongkae Taeho Kongbo, No pp. given
 CODEN: ERXXA7
 IN Lee, Jeong Geon
 AB PURPOSE: An automatic water toxicant measuring instrument is provided which measures the light emission of photogenic microorganisms induced by toxicants, in which pretreatment of photogenic microorganisms is not involved so, the app. measures water toxicant easily and economically. CONSTITUTION: An instrument for measuring water toxicant using photogenic microorganisms comprises the following parts: (1) a stage driving part consisting of plural vials which contains test samples and immobilized microorganisms, a movable X-Y stage, a sub-driver connected to the stage, and a controller connected to the sub-driver for controlling the position of the stage; (2) a sample supplying part consisting of an sample inlet, a test sample storage plant, of which one side is connected to an automatic sample collector and other side is connected to an outlet of water, and a sample inlet controller connected to the sample inlet; (3) a luminescence intensity measuring part; and an arithmetic and control part. Immobilized microorganisms are as follows; Photogenic microorganisms such as Photobacterium phosphoreum, Vibrio fischeri, or recombinant microorganisms with lux gene are immobilized on **porous** matrix such as sodium **alginate**, strontium **alginate**, .kappa.-carrageenan, polyacrylamide, cellulose or agarose. Sample water is sequentially added to aligned vials contg. immobilized photogenic microorganism and the difference of luminescence intensity is measured by luminescence dosimeter before and after the sample injection.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI KR 2000031934	A	20000605	KR 1998-48198	19981111

L7 ANSWER 8 OF 10 MEDLINE
 AN 2001479229 MEDLINE
 TI Three-dimensional cartilage formation by bone marrow-derived cells seeded in polylactide/alginate amalgam.
 SO JOURNAL OF BIOMEDICAL MATERIALS RESEARCH, (2001 Dec 5) 57 (3) 394-403. Journal code: 0112726. ISSN: 0021-9304.
 AU Caterson E J; Nesti L J; Li W J; Danielson K G; Albert T J; Vaccaro A R; Tuan R S
 AB Bone marrow-derived cells are considered as candidate cells for cartilage tissue engineering by virtue of their ability to undergo chondrogenesis in vitro when cultured in high density or when embedded within a three-dimensional matrix in the presence of growth factors. This study evaluated the potential of human bone marrow-derived cells for cartilage tissue engineering by examining their chondrogenic properties within a three-dimensional amalgam scaffold consisting of the biodegradable polymer, poly-L-lactic acid (PLA) alone, and with the polysaccharide gel, **alginate**. Cells were suspended either in **alginate** or medium and loaded into **porous** PLA blocks. **Alginate** was used to improve cell loading and retention within the construct, whereas the PLA polymeric scaffold provided appropriate mechanical support and stability to the composite culture. Cells seeded in the PLA/

alginate amalgams and the plain PLA constructs were treated with different concentrations of recombinant human transforming growth factor-beta 1 (TGF-beta 1) either continuously (10 ng/mL) or only for the initial 3 days of culture (50 ng/mL). Chondrogenesis was assessed at weekly intervals with cultures maintained for up to 3 weeks. Histological and immunohistochemical analysis of the TGF-beta 1-treated PLA/**alginate** amalgam and PLA constructs showed development of a cartilaginous phenotype from day 7 to day 21 as demonstrated by colocalization of Alcian blue staining with collagen type II and cartilage proteoglycan link protein. Expression of cartilage specific **genes**, including collagen types II and IX, and aggrecan, was detected in TGF-beta 1-treated cultures by reverse transcription-polymerase chain reaction analysis. The initiation and progression of chondrogenic differentiation within the polymeric macrostructure occurred with both continuous and the initial 3-day TGF-beta 1 treatment regimens, suggesting that key regulatory events of chondrogenesis take place during the early period of cell growth and proliferation. Scanning electron microscopy revealed abundant cells with a rounded morphology in the PLA/**alginate** amalgam. These findings suggest that the three-dimensional PLA/**alginate** amalgam is a potential candidate bioactive scaffold for cartilage tissue engineering applications. Copyright 2001 John Wiley & Sons, Inc. J Biomed Mater Res 57: 394-403, 2001

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(FILE 'HOME' ENTERED AT 13:39:01 ON 23 JAN 2003)

FILE 'MEDLINE, A3RICOLA, CANCERLIT, SCISEARCH, CAPLUS, MEDICINF' ENTERED
AT 13:39:09 ON 23 JAN 2003

L1 26 S POROUS ALGINATE
L2 15 DUP REM L1 (11 DUPLICATES REMOVED)
L3 15 SORT L2 PY

=> d a n t i s o a u a b p i l 3 l 2 3-9

L3 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2000:488827 CAPLUS
DN 133:271550
TI Porous carriers for biomedical applications based on alginate hydrogels
SO Biomaterials (2000), 21(19), 1921-1927
CODEN: BIMADU; ISSN: 0142-9612
AJ Eiselt, P.; Yeh, J.; Latvala, R. K.; Shea, L. D.; Mooney, D. J.
AB Macroporous scaffolds are typically utilized in tissue engineering applications to allow for the migration of cells throughout the scaffold and integration of the engineered tissue with the surrounding host tissue. A method to form macroporous beads with an interconnected pore structure from alginate has been developed by incorporating gas pockets within alginate beads, stabilizing the gas bubbles with surfactants, and subsequently removing the gas. Macroporous scaffolds could be formed from alginate with different av. mol. wts. (5-200 kDa) and various surfactants. The gross morphol., amt. of interconnected pores, and total void vol. was investigated both qual. and quant. Importantly, macroporous alginate beads supported cell invasion in vitro and in vivo.

L3 ANSWER 3 OF 15 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 79:368377 SCISEARCH
TI USE OF **POROUS ALGINATE** MATERIAL ALGIPOR IN TREATMENT OF BURNS
SO KHIRURGIYA, (1979) Vol. 1979, No. 6, pp. 86-88.
AU KUZIN M I (Reprint); SOLOGUB V K; YUDENICH V V; RESHETOV I A; YAKOVLEV G B

L3 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1987:50599 CAPLUS
DN 106:50599
TI **Porous alginate** material
SO U.S.S.R.
From: Otkrytiya, Izobret. 1985, (29), 105-6.
CODEN: UFXAF
IN Vainerman, E. S.; Lozinskii, V. I.; Rogozhin, S. V.; Raskina, L. P.; Shapiro, L. A.; Yakubovich, V. S.; Bronshtein, B. Yu.
AB A porous alginate material with increased d. and high H2O-retaining capacity is prepd. by mixing a 1-4% soln. of Na alginate with a 1-4% soln. of a Ca salt at a 3:1-8:1 molar ratio of alginate monosaccharide unit to Ca salt. The resulting mixt. is frozen in 3-30 min at -6.degree. to -190.degree., allowed to stand for 1-24 h, thawed, and dried under mech. compression.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI SU 1171474	A1	19850807	SU 1983-3600824	19830607

L3 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1986:193214 CAPLUS
DN 104:193214
TI **Porous alginate** with a wound-healing effect
SO U.S.S.R.
From: Otkrytiya, Izobret. 1985, (29), 106.
CODEN: URXXAF
IN Vainerman, E. S.; Lozinskii, V. I.; Rogozhin, S. V.; Raskina, L. P.; Shapiro, L. A.; Yakubovich, V. S.; Shenker, M. B.; Komissarova, A. L.; Potapov, V. D.; et al.
AB The resistance of the porous surgical material described in USSR Patent 658148 to an aq. medium is improved by keeping the gel obtained from mixing an aq. soln. of Na alginate with a Ca salt in a frozen state from -20 to -40.degree. for 3-24 h prior to freeze-drying.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	SU 1171476	A2	19850807	SU 1983-3614921	19830607
L3	ANSWER 6 OF 15 CAPLUS COPYRIGHT 2003 ACS				
AN	1988:57576 CAPLUS				
DN	108:57576				
TI	Porous alginate moldings				
SO	Jpn. Kokai Tokkyo Koho, 4 pp. CODEN: JKXXAF				
IN	Hirasa, Okihiko				
AB	Porous moldings useful in culturing of enzymes, microbes, etc. are prepd. by heating aq. alginates with aq. poly(vinyl Me ether) (I) to the phase transition temp. (T) of I adding aq. metal salts forming insol. alginates, and extg. I with water at temps. below T. A mixt. of 1 part 5% Na alginate and 1 part 30% I was coated (0.5 mm) on glass, dipped for 10 min in 2% CuSO4 at 40.degree., removed from the glass, and extd. with water to give a Cu alginate film with pore diam. 10-50 .mu. and water permeability 70 times that of a film prepd. without I.				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62250040	A2	19871030	JP 1986-93833	19860423
	JP 05053826	B4	19930811		
L3	ANSWER 7 OF 15 CAPLUS COPYRIGHT 2003 ACS				
AN	1993:630640 CAPLUS				
DN	119:230640				
TI	Low-density polymeric materials having high porosity and surface areas for metal recovery by extraction				
SO	PCT Int. Appl., 73 pp. CODEN: PIXXD2				
IN	Unger, Peter D.; Rohrbach, Ronald P.				
AB	The porous polymers having an open-cell structure with d. <1.0 g/cm3 and pore vol. .gtoreq.0.5 cm3/g can be prepd. from a gel-forming material or derived from a natural or synthetic polysaccharide, and can be modified for recovery of metal values from fluid streams (esp. by extn.). The synthetic polymers have sp. surface area .gtoreq.85 m2/g (or .gtoreq.200 m2/g if prepd. from chitosan), and are suitable for use in extn. columns. The porous polymers can be manufd. from a gel preform by replacing the gelling solvent with a crosslinking solvent, adding a crosslinking agent, and sepn. of the polymer from the residual solvent. The polymers can be modified for removal of org. or inorg. pollutants, or optionally carbonized for other applications. Thus, porous alginate pellets were manufd. with bulk d. of 0.042 g/cm3, sp. surface area 200 m2/g, pore vol. 2.917 cm3/g, and av. pore size 517 .ANG.. The porous pellets were suitable for extn. of Cd2+, Ni2+, Pb2+, Cu2+, and Cr3+ ions present at 10-1000 ppm in aq. test solns.				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9312877	A1	19930708	WO 1992-US10567	19921209
	W: JP				
	FW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 625070	A1	19941123	EP 1993-900963	19921209
	EP 625070	B1	19980708		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 06511197	T2	19941215	JP 1992-511687	19921209
	AT 168040	E	19980715	AT 1993-900963	19921209
	ES 2118219	T3	19980916	ES 1993-900963	19921209
	US 5525710	A	19960611	US 1994-304617	19940912
L3	ANSWER 8 OF 15 MEDLINE				
AN	97478063 MEDLINE				
TI	Porous alginate --poly(ethylene glycol) entrapment system for the cultivation of mammalian cells.				
SO	BIOTECHNOLOGY PROGRESS, (1997 Sep-Cct) 13 (5) 569-76. Journal code: 8506292. ISSN: 8756-7938.				
AU	Seifert D B; Phillips J A				
AB	A novel gel entrapment method has been developed where macropores are created within alginate beads to provide an environment for high-density growth of mammalian cells. The method takes advantage of an interaction				

between poly(ethylene glycol) (PEG) and alginate to provide a network of pores within the bead for growth while the surrounding alginate matrix retains the integrity of the bead and minimizes cell leakage. Hybridomas were grown to a density approaching 10^8 cells/mL of beads in this system, while conventional alginate restricted growth to a maximum of 2×10^7 cells/mL of beads. In addition, cell leakage was minimal even at high cell densities, which was not the case with the conventional alginate system. Study of the conventional system determined that cell growth was limited by the alginate matrix; increasing the alginate concentrations resulted in lower final cell densities. In contrast, the PEG-alginate system permits growth in pores so the alginate matrix serves only as a structural matrix for cells. The pore size can be varied as a function of PEG concentration (10-20 wt % PEG) to provide radially defined areas for cell growth and radial diffusion pathways for nutrients/products in the adjacent alginate matrix. Because the PEG-alginate entrapment process does not require additional chemical reactions or temperature changes, the system offers a simple alternative to attain high cell densities in an immobilized bead system. As an illustration of the concept, cells entrapped in this system were grown to high density in both batch and perfusion modes for the production of monoclonal antibodies. Using the suspension batch culture as the base case, the specific monoclonal antibody production rate increased 1.6-fold for the slower growing batch-immobilized culture and 3-fold for the immobilized perfusion culture.

- L3 ANSWER 9 OF 15 SCISEARCH COPYRIGHT 2003 ISI (R)
 AN 96:897210 SCISEARCH
 TI Controlled release of interleukin-2 for tumour immunotherapy using alginate/chitosan porous microspheres
 SO JOURNAL OF CONTROLLED RELEASE, (3 JAN 1997) Vol. 43, No. 1, pp. 65-74. Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS. ISSN: 0168-3659.
 AU Liu L S; Liu S Q; Ng S Y; Froix M; Ohno T; Heller J (Reprint)
 AB Porous microspheres were formed by the gelation of two polysaccharides, a polyanionic sodium alginate and a polycationic chitosan, followed by lyophilization which creates the porous structure. Porous microspheres were also formed by gelation of sodium alginate with CaCl_2 and gelation of sodium alginate with polylysine. FITC-BSA was incorporated into the microspheres by mixing the protein with the polysaccharide solution prior to gelation. Interleukin-2 (IL-2) was incorporated into the preformed microspheres by diffusion from an external aqueous solution of IL-2. Sustained release of the proteins from **porous alginate** /chitosan microspheres is of longer duration than from alginate/ CaCl_2 , or from alginate/polylysine microspheres. Activity of the released IL-2 was investigated by determining the induction of cytotoxic T lymphocytes (CTL) when incubated with tumor cells and lymphocytes. It was found that the IL-2 remained active in the alginate/chitosan microspheres since the released IL-2 triggered induction of CTL. Further, IL-2 released in a sustained manner triggered induction of CTL more efficiently than free IL-2. Tumor-killing specific activity of CTL was the same whether induced by the sustained released IL-2 or by the addition of free IL-2.